

THE TAXONOMY OF NORTH AMERICAN LOTI (FABACEAE: LOTEAE):
NEW NAMES IN *ACMISPON* AND *HOSACKIA*

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ABSTRACT

Within the context of the preparation of the second edition of The Jepson Manual and of the treatment of the group for the Flora of North America, the author recognizes two genera within North American Loteae: *Hosackia* and *Acmispon* (including *Ottleya* and *Syrmatium*). New names are provided for varieties within *Hosackia*, and for species and varieties not previously included within *Acmispon*.

RESUMEN

En el contexto de la preparación de la segunda edición de "The Jepson Manual" y del tratamiento del grupo para la Flora of North America, el autor reconoce dos géneros en las Loteae norteamericanas: *Hosackia* y *Acmispon* (que incluye *Ottleya* y *Syrmatium*). Se aportan nuevos nombres para variedades de *Hosackia*, y para especies y variedades no incluidas previamente en *Acmispon*.

The taxonomy of *Lotus* s.l. (Fabaceae: Loteae) has been controversial, particularly with respect to the issue of including or excluding the North American species from the genus; Cullen (1959) and Sokoloff (1999, 2000) together provide a summary of the taxonomic history involved. Following Greene (1890), it became usual (though not unanimous) to treat North American species within *Lotus* s.l., as was done, among others, by Ottley (1923, 1944), Isely (1981, 1993), Barneby (1989), Arambarri (2000), and Stenglein et al. (2003). Traditionally, three subgenera have been recognized in North America: *Hosackia*, *Syrmatium*, and *Acmispon*, the latter subdivided into sections *Microlotus* and *Simpeteria*. In the last 10 years, however, morphological studies have shown that North American taxa were distinct from Eurasian *Lotus* s.s. Therefore, Sokoloff (1999, 2000a, b; Sokoloff & Lock 2005) proposed the recognition of four genera of North American Loteae: *Hosackia*, *Acmispon*, *Syrmatium*, and *Ottleya* (section *Simpeteria* segregated), corresponding with the four traditionally used subgeneric groups mentioned above. This taxonomy was accepted by Arambarri et al. (2005) in their numerical taxonomic study of the American species. The molecular phylogenetic analyses of Allan and Porter (2000) and Allan et al. (2003), based on the nrDNA internal transcribed spacer (ITS), confirmed that the North American taxa were distinct from *Lotus* s.s. and resulted in the recognition of two clades among American species: the *Hosackia* clade and the clade comprising the subgenera *Acmispon* and *Syrmatium*, and section *Simpeteria* (*Ottleya*), hereafter called the *Acmispon* clade. *Hosackia* appears monophyletic on both morphological (e.g., triaperturate pollen, leafy stipules) and molecular grounds, except for the unexplained position of *L. aboriginus* in Allan and Porter (2000). Nomenclatural transfer of some varieties recognized in *Hosackia* species has yet to be done, however.

The taxonomic disposition of species within the *Acmispon* clade (Allan & Porter 2000; Allan et al. 2003) (with 4-aperturate pollen and gland-like stipules, among others) appears less clear-cut. While there was some resolution within the clade in the ITS-based phylogenetic study of Alan and Porter (2000), Allan et al. (2003) showed a well-supported but unresolved *Acmispon* clade. In the Allan and Porter analysis, subgenus *Syrmatium* appears monophyletic, with *L. salsuginosus* (*Acmispon maritimus*, sect. *Acmispon*, Sokoloff 2000) – *L. aboriginus* (*Hosackia*) as sister to the subclade. A second subclade includes members of sections *Simpeteria* (*Ottleya*, Sokoloff 1999) and *Microlotus* (*L. wrangelianus*; *Acmispon* sect. *Anisolotus*, Sokoloff 2000). It is worth noting that Ottley (1944) included her new section *Simpeteria* within *Lotus* subgenus *Acmispon*.

Thus *Acmispon*, as defined by Sokoloff (2000) and as traditionally understood, appears polyphyletic in the ITS phylogeny, each section belonging to a separate clade. Only two members of *Acmispon* were included in the study, which prevents further conclusion. Thus, contrary to what morphological data may suggest, it does not seem possible to clearly delimit three monophyletic groups within the clade. Therefore, I am suggesting that two genera should be recognized among American Loti at the present time, corresponding to the two clades recognized in molecular analyses: *Hosackia* and *Acmispon* (the oldest generic name available for the *Acmispon* clade). Given the ambiguity concerning the monophyly of lineages within *Acmispon*, I prefer not to recognize subgeneric taxa at the present time, even though the *Syrmatium* group appears monophyletic. The delimitation of such taxa will have to be evaluated using more complete molecular and morphological data sets.

The purpose of this paper is to provide the nomenclatural combinations that are needed in *Hosackia* and *Acmispon*, particularly in view of the upcoming treatments of these genera for the second edition of The Jepson Manual and for the Flora of North America project. I am mainly following the taxonomy of Isely (1981, 1993) for the North American species. A list of already accepted names in *Hosackia* and *Acmispon* for North America north of Mexico is provided.

NEW COMBINATIONS IN *HOSACKIA*

- Hosackia crassifolia*** Benth. var. **otayensis** (Moran ex Isely) Brouillet, comb. nov. BASIONYM: *Lotus crassifolius* (Benth.) Greene var. *otayensis* Moran ex Isely, *Brittonia* 30:466–467. 1978.
- Hosackia oblongifolia*** Benth. var. **cuprea** (Greene) Brouillet, comb. nov. BASIONYM: *Lotus cupreus* Greene, *Leafl. Bot. Obs. Crit.* 1(5):74, 1904. *Hosackia cuprea* (Greene) Smiley, *Univ. Calif. Publ. Bot.* 9:257. 1921. *Lotus oblongifolius* (Benth.) Greene var. *cupreus* (Greene) Ottley, *Univ. Calif. Publ. Bot.* 10(3):206. 1923.
- Hosackia stipularis*** Benth. var. **ottleyi** (Isely) Brouillet, comb. nov. BASIONYM: *Lotus stipularis* (Benth.) Greene var. *ottleyi* Isely, *Brittonia* 30:468–469. 1978.

NEW COMBINATIONS IN *ACMISPON*

- Acmispon americanus*** (Nutt.) Rydb. var. **helleri** (Britton) Brouillet, comb. nov. BASIONYM: *Lotus helleri* Britton, *Bull. Torrey Bot. Club* 17:312–323. 1890. *Hosackia helleri* (Britton) Brand, *Bot. Jahrb. Syst.* 25:228. 1898. *Hosackia helleri* (Britton) Blomq. & Oosting, *Spring Fl. Piedmont* 79. 1940. *Acmispon helleri* (Britton) A. Heller, *Cat. N. Amer. Pl.* 205. 1914. *Acmispon helleri* (Britton) Small, *Man. S.E. Fl.* 687. 1933. *Lotus purshianus* Clem. & E.G. Clem. var. *helleri* (Britton) Isely, *Brittonia* 30:468. 1978. *Lotus unifoliolatus* Benth. var. *helleri* (Britton) Kartesz & Gandhi, *Phytologia* 71:96. 1991.
- Acmispon argophyllus*** (A. Gray) Brouillet, comb. nov. BASIONYM: *Hosackia argophylla* A. Gray, *Pl. Nov. Thurb.* 316. 1854. *Syrmatium argophyllum* (A. Gray) Greene, *Bull. Calif. Acad. Sci.* 2:147. 1886. *Lotus argophyllus* (A. Gray) Greene, *Pittonia* 2:149. 1890. *Acmispon argophyllus* (A. Gray) Brouillet var. *argophyllus*. *Hosackia argophylla* A. Gray var. *argophylla*.
Hosackia argentea Kellogg, *Proc. Calif. Acad. Sci.* 3:38. 1863.
Hosackia argophylla A. Gray var. *decora* I.M. Johnst., *Bull. S. Calif. Acad. Sci.* 17(2):63–64. 1918. *Lotus argophyllus* (A. Gray) Greene var. *decorus* (I.M. Johnst.) Ottley, *Univ. Calif. Publ. Bot.* 10(3):237–238. 1923. *Lotus argophyllus* (A. Gray) Greene subsp. *decorus* (I.M. Johnst.) Munz, *Fl. S. Calif.* 446. 1974.
- Acmispon argophyllus*** (A. Gray) Brouillet var. **adsurgens** (Dunkle) Brouillet, comb. nov. BASIONYM: *Lotus argophyllus* (A. Gray) Greene var. *adsurgens* Dunkle, *Bull. S. Calif. Acad. Sci.* 39:197. 1941. *Lotus argophyllus* (A. Gray) Greene subsp. *adsurgens* (Dunkle) P.H. Raven, *Aliso* 5:326. 1963.
- Acmispon argophyllus*** (A. Gray) Brouillet var. **argenteus** (Dunkle) Brouillet, comb. nov. BASIONYM: *Lotus argophyllus* (A. Gray) Greene var. *argenteus* Dunkle, *Bull. S. Calif. Acad. Sci.* 39:176. 1940.
Hosackia ornithopus Greene, *Bull. Calif. Acad. Sci.* 1:185. 1885. *Syrmatium ornithopus* (Greene) Greene, *Bull. Calif. Acad. Sci.* 2:148. 1886. *Lotus ornithopus* (Greene) Greene, *Pittonia* 2:149. 1890. *Lotus argophyllus* (A. Gray) Greene var. *ornithopus* (Greene) Ottley, *Univ. Calif. Publ. Bot.* 10:238. 1923. *Lotus argophyllus* subsp. *ornithopus* (Greene) P.H. Raven, *Aliso* 5:326. 1963.
Lotus argophyllus (A. Gray) Greene var. *hancockii* Dunkle, *Bull. S. Calif. Acad. Sci.* 39:175. 1940.
Hosackia venusta Eastw., *Proc. Calif. Acad. Sci.*, Ser. 3, 1:103, t. 8. 1898. *Hosackia ornithopus* Greene subsp. *venusta* (Eastw.) Abrams, III. *Fl. Pac. States* 2:550. 1944. *Lotus venustus* (Eastw.) A. Heller, *Cat. N. Amer. Pl.* 7. 1900. *Syrmatium venustum* (Eastw.) Davidson & Moxley, *Fl. S. Calif.* 199. 1923.

Acmispon argophyllus (A. Gray) Brouillet var. ***fremontii*** (A. Gray) Brouillet, comb. nov. BASIONYM: *Hosackia argophylla* A. Gray var. *fremontii* A. Gray, Proc. Acad. Nat. Sci. Philadelphia 15:347. 1864. *Hosackia fremontii* (A. Gray) Abrams, Ill. Fl. Pacific States 2:550. 1944. *Lotus fremontii* (A. Gray) A. Heller, Cat. N. Amer. Pl. 7. 1900. *Syrmatium fremontii* (A. Gray) A. Heller, Muhlenbergia 9(5):67. 1913. *Lotus argophyllus* (A. Gray) Greene var. *fremontii* (A. Gray) Ottley, Univ. Calif. Publ. Bot. 10(3):237–238. 1923.

Syrmatium niveum Greene, Bull. Calif. Acad. Sci. 2:148. 1863, not *Hosackia nivea* S. Watson. *Lotus niveus* (Greene) Greene, Pittonia 2:148. 1890. *Lotus argophyllus* (A. Gray) Greene var. *niveus* (Greene) Ottley, Univ. Calif. Publ. Bot. 10(3):237–238. 1923. *Lotus argophyllus* (A. Gray) Greene subsp. *niveus* (Greene) Munz, Fl. S. Calif. 446. 1974.

Acmispon argyreus (Greene) Brouillet, comb. nov. BASIONYM: *Hosackia argyrea* Greene, Bull. Calif. Acad. Sci. 1(4A):184. 1886 [1885]. *Lotus argyrea* (Greene) Greene, Pittonia 2:144. 1890. *Anisolotus argyrea* (Greene) A. Heller, Muhlenbergia 8:47. 1912. *Ottleya argyrea* (Greene) D.D. Sokoloff, Feddes Repert. 110 (1–2):94.

Acmispon argyrea (Greene) Brouillet var. ***multicaulis*** (Ottley) Brouillet, comb. nov. BASIONYM: *Lotus wrightii* (A. Gray) Greene var. *multicaulis* Ottley, Univ. Calif. Publ. Bot. 10:211, pl. 70. 1923. *Hosackia wrightii* A. Gray subsp. *multicaulis* (A. M. Ottley) Abrams, Ill. Fl. Pac. States 2:543. 1944. *Lotus argyrea* (Greene) Greene subsp. *multicaulis* (Ottley) Munz, Aliso 4:93. 1958. *Lotus argyrea* (Greene) Greene var. *multicaulis* (Ottley) Isely, Brittonia 30:466. 1978.

Acmispon argyrea (Greene) Brouillet var. ***notitius*** (Isely) Brouillet, comb. nov. BASIONYM: *Lotus argyrea* (Greene) Greene var. *notitius* Isely, Brittonia 30:466. 1978.

Acmispon cytisoides (Benth.) Brouillet, comb. nov. BASIONYM: *Hosackia cytisoides* Benth., Trans. Lin. Soc. London 17:366. 1837, non *Lotus cytisoides* L. 1753. *Syrmatium cytisoides* (Benth.) Greene, Bull. Calif. Acad. Sci. 2:147. 1886.

Hosackia cytisoides Benth. var. *rubescens* Nutt. ex Torr. & A. Gray, Fl. N. Amer. 1(2):324. 1838. *Hosackia rubescens* (Torr. & A. Gray) Anon., in index., Proc. Biol. Soc. Wash. 13:203. 1900. *Depranolobus rubescens* Nutt. ex Torr. & A. Gray, Fl. N. Amer. 1(2):324. 1838. *Lotus benthamii* Greene, Pittonia 2(9):148. 1890.

Acmispon dendroideus (Greene) Brouillet, comb. nov. BASIONYM: *Syrmatium dendroideum* Greene, Bull. Calif. Acad. Sci. 2(6B):146. 1886. *Lotus dendroideus* (Greene) Greene, Pittonia 2:148. 1890. *Hosackia dendroidea* (Greene) Abrams, Ill. Fl. Pacific States 2:552. 1944.

Acmispon dendroideus (Greene) Brouillet var. ***traskiae*** (Noddin) Brouillet, comb. nov. BASIONYM: *Syrmatium traskiae* Eastw. ex Noddin Fl. Los Ang. 201. 1917. *Lotus scoparius* (Nutt. ex Torr. & A. Gray) Ottley var. *traskiae* (Eastw. ex Noddin) Ottley, Univ. Calif. Publ. Bot. 10(3):229. 1923. *Lotus scoparius* (Nutt. ex Torr. & A. Gray) Ottley subsp. *traskiae* (Noddin) P.H. Raven, Aliso 5:326. 1963. *Lotus dendroideus* (Greene) Greene var. *traskiae* (Noddin) Isely, Brittonia 30:467. 1978.

Acmispon dendroideus (Greene) Brouillet var. ***veatchii*** (Greene) Brouillet, comb. nov. BASIONYM: *Hosackia veatchii* Greene, Bull. Calif. Acad. Sci. 1:83. 1885. *Syrmatium veatchii* (Greene) Greene, Bull. Calif. Acad. Sci. 2:148. 1886. *Lotus veatchii* (Greene) Greene, Pittonia 2:148. 1890. *Lotus scoparius* (Nutt. ex Torr. & A. Gray) Ottley var. *veatchii* (Greene) Ottley, Univ. Calif. Publ. Bot. 10(3):228. 1923. *Lotus dendroideus* (Greene) Greene var. *veatchii* (Greene) Isely, Brittonia 30:467. 1978.

Syrmatium patens Greene, Bull. Calif. Acad. Sci. 2:147. 1886.

Acmispon distichum (Greene) Brouillet, comb. nov. BASIONYM: *Hosackia disticha* Greene, Bull. Calif. Acad. Sci. 1(4A):186. 1885. *Syrmatium distichum* (Greene) Greene, Bull. Calif. Acad. Sci. 2(6B):148. 1886. *Lotus distichus* (Greene) Greene, Pittonia 2(9):149. 1890.

Acmispon flexuosus (Greene) Brouillet, comb. nov. BASIONYM: *Hosackia flexuosa* Greene, Bull. Calif. Acad. Sci. 1:82. 1885, non *Lotus flexuosus* Desr. 1792. *Ottleya flexuosa* (Greene) D.D. Sokoloff, Feddes Repert. 110(1–2):94. 1999.

Lotus cedrosensis Greene, Pittonia 2(9):144. 1890.

Acmispon glabrus (Vogel) Brouillet, comb. nov. BASIONYM: *Syrmatium glabrum* Vogel, Linnaea 10:591. 1835–1836. *Lotus glaber* (Vogel) Greene, Pittonia 2:148. 1890, nom. illeg., non *Lotus glaber* Mill. 1768. *Hosackia glabra* (Vogel) Torr., U. S. Expl. Exped., Phan. 2:274. 1874. *Hosackia crassifolia* Nutt. ex Torr. & A. Gray subsp. *glabra*. *Anisolotus glaber* (Vogel) M. Armstr. & Thornber, Field Book W. Wild Fl. 244. 1915.

Hosackia scoparia Nutt. ex Torr. & A. Gray, Fl. N. Amer. 1:325. 1838. *Lotus scoparius* (Nutt. ex Torr. & A. Gray) Ottley, Univ. Calif. Publ. Bot. 10 (3):229, pl. 77 1923.

Hosackia scoparia Nutt. ex Torr. & A. Gray var. *diffusa* A. Gray, Proc. Acad. Nat. Sci. Philadelphia 1863: 346. 1864. *Hosackia glabra* (Vogel) Torr. var. *diffusus* A. Gray, Proc. Acad. Nat. Sci. Philadelphia 1863: 346. 1864. *Lotus diffusus* (A. Gray) A. Heller, Cat. N. Amer. Pl. 7. 1900.

Acmispon glabrus (Vogel) Brouillet var. **brevialatus** (Ottley) Brouillet, comb. nov. BASIONYM: *Lotus scoparius* (Nutt. ex Torr. & A. Gray) Ottley var. *brevialatus* Ottley, Univ. Calif. Publ. Bot. 10(3):227, pl. 77, fig. 10–16. 1923. *Hosackia glabra* (Vogel) Torr. subsp. *brevialata* (A. M. Ottley) Abrams, Ill. Fl. Pacific States 2:552. 1944. *Lotus scoparius* (Nutt. ex Torr. & A. Gray) Ottley subsp. *brevialatus* (Ottley) Munz, Fl. S. Calif. 450. 1974.

Acmispon grandiflorus (Benth.) Brouillet, comb. nov. BASIONYM: *Hosackia grandiflora* Benth., Trans. Linn. Soc. London 17:366. 1837. *Lotus grandiflorus* (Benth.) Greene, Pittonia 2:145. 1890. *Anisolotus grandiflorus* (Benth.) A. Heller, Mulhenbergia 8(1–2):20. 1912. *Ottleya grandiflora* (Benth.) D.D. Sokoloff, Feddes Repert. 110(1–2):94. 1999.

Hosackia ochroleuca Nutt. ex Torr. & A. Gray, Fl. N. Amer. 1(2):323. 1838.

Hosackia grandiflora Benth. var. *anthylloides* A. Gray, Proc. Acad. Nat. Sci. Philadelphia 1863: 350. 1864. *Hosackia anthylloides* (A. Gray) Millsp., Publ. Field Columbian Mus., Bot. Ser. 5:150. 1923.

Hosackia occulta Greene, Bull. Calif. Acad. Sci. 2:394. 1887.

Lotus guadalupensis Greene, Pittonia 2:144. 1890. *Hosackia guadalupensis* (Greene) Brand, Bot. Jahrb. Syst. 25:228. 1898.

Lotus leucophaeus Greene, Pittonia 2:145. 1890. *Anisolotus leucophaeus* (Greene) A. Heller, Mulhenbergia 8:48. 1912. *Hosackia leucophaea* (Greene) Abrams, Ill. Fl. Pacific States 2:542. 1944.

Lotus confinis Greene, Erythea 1(12):258. 1893.

Lotus grandiflorus (Benth.) Greene var. *mutabilis* Ottley, Univ. Calif. Publ. Bot. 10(3):208, pl. 68, fig. 2–6, pl. 69, fig. 1. 1923.

Acmispon grandiflorus (Benth.) Brouillet var. **macranthus** (Greene) Brouillet, comb. nov. BASIONYM: *Lotus grandiflorus* (Benth.) Greene var. *macranthus* (Greene) Isely, Brittonia 30:467. 1978. *Hosackia macrantha* Greene, Bull. Calif. Acad. Sci. 1:81. 1885. *Lotus macranthus* (Greene) Greene, Pittonia 2(9):146. 1890. *Anisolotus macranthus* (Greene) A. Heller, Mulhenbergia 8(4):48. 1912.

Acmispon greenei (Wooton & Standl.) Brouillet, comb. nov. BASIONYM: *Anisolotus greenei* Wooton & Standl., Contr. U.S. Natl. Herb. 1(4A):185. 1886 [1885]. *Hosackia greenei* (Wooton & Standl.) Wiggins, Contr. Dudley Herb. 4(2):19. 1950. *Ottleya greenei* (Wooton & Standl.) D.D. Sokoloff, Feddes Repert. 110 (1–2):94. 1999.

Hosackia mollis Greene, Bull. Calif. Acad. Sci. 1:185. 1885, nom. illeg., non Nutt. 1838. *Anisolotus mollis* (Greene) A. Heller, Muhlenbergia 8:60. 1912. *Lotus mollis* (Greene) Greene, Pittonia 2:143. 1890, non Balf. f. 1882. *Lotus greenei* Ottley, J. Wash. Acad. Sci. 29(11):483. 1939, nom. nov.

?*Lotus neomexicanus* Greene, Pittonia 2(9):143. 1890. *Hosackia neomexicana* (Greene) Brand, Bot. Jahrb. Syst. 25:229. 1898. *Anisolotus neomexicanus* (Greene) A. Heller, Muhlenbergia 8(5):60. 1912. *A. neomexicanus* (Greene) Wooton & Standl., Contr. U.S. Natl. Herb. 16(4):135. 1913.

Acmispon haydonii (Orcutt) Brouillet, comb. nov. BASIONYM: *Hosackia haydonii* W. Amer. Sci. 6:63. 1889. *Lotus haydonii* (Orcutt) Greene, Pittonia 2(9):149. 1890. *Syrmatium haydonii* (Orcutt) Brand, Bot. Jahrb. Syst. 25:228. 1898. *Syrmatium haydonii* (Orcutt) A. Heller, Muhlenbergia 9(5):67. 1913.

Acmispon heermannii (Greene) Brouillet, comb. nov. BASIONYM: *Hosackia heermannii* Durand & Hilg., Pl. Heermann. 39. 1854. *Syrmatium heermannii* (Durand & Hilg.) Greene, Bull. Calif. Acad. Sci. 2(6B):148. 1886. *Lotus heermannii* (Durand & Hilg.) Greene, Pittonia 2(9):150. 1890. *Lotus eriophorus* Greene var. *heermannii* (Durand & Hilg.) Ottley, Univ. Calif. Publ. Bot. 10(3):232–234. 1923.

Hosackia decumbens Benth. var. *glabriuscula* Hook. & Arn., Bot. Beechey Voy. 137. 1832. *Hosackia tomentosa* Hook. & Arn. subsp. *glabriuscula* (Hook. & Arn.) Abrams, Ill. Fl. Pacific States 2:546. 1944.

Acmispon heermannii (Greene) Brouillet var. **orbicularis** (A. Gray) Brouillet, comb. nov. BASIONYM: *Hosackia heermannii* Durand & Hilg. var. *orbicularis* A. Gray, Proc. Acad. Nat. Sci. Philadelphia 15:348. 1864. *Lotus heermannii* (Durand & Hilg.) Greene var. *orbicularis* (A. Gray) Isely, Brittonia 30:467. 1978.

Lotus eriophorus Greene, Erythea 1(10):207. 1893. *Lotus heermannii* (Durand & Hilg.) Greene var. *eriophorus* (Greene) Ottley, Brittonia 5:81. 1944. *Syrmatium eriophorum* (Greene) A. Heller, Muhlenbergia 9(5):67. 1913.

Hosackia tomentosa Hook. & Arn., Bot. Beechey Voy. 137. 1832. *Hosackia tomentosa* Hook. & Arn. subsp. *tomentosa*. *Lotus tomentosus* (Hook. & Arn.) Greene, Pittonia 2:150. 1890, nom. illeg., non Desr. 1792. *Syrmatium tomentosum* (Hook. & Arn.) Vogel, Linnaea 10:591. 1835–36.

Drepanolobus lanatus Nutt. ex Torr. & A. Gray, Fl. N. Amer. 1(2):324. 1838.

Acmispon intricatus (Eastw.) Brouillet, comb. nov. BASIONYM: *Lotus intricatus* Eastw., Leaf. W. Bot. 3(7):159. 1942. *Ottleya intricata* (Eastw.) D.D. Sokoloff, Feddes Repert. 110(1–2):95. 1999.

Acmispon junceus (Benth.) Brouillet, comb. nov. BASIONYM: *Hosackia juncea* Benth., Trans. Linn. Soc. London 17:366. 1837. *Syrmatium junceum* (Benth.) Greene, Bull. Calif. Acad. Sci. 2(6B):147. 1886. *Lotus junceus* (Benth.) Greene, Pittonia 2(9):148. 1890.

Acmispon junceus (Benth.) Brouillet var. ***biolettii*** (Greene) Brouillet, comb. nov. BASIONYM: *Lotus biolettii* Greene, Pittonia 2(11A):222. 1892. *Hosackia biolettii* (Greene) Rattan, West Coast Botany 34. 1898. *Syrmatium biolettii* (Greene) A. Heller, Muhlenbergia 9(5):67. 1913. *Lotus junceus* (Benth.) Greene var. *biolettii* (Greene) Ottley, Univ. Calif. Publ. Bot. 10(3):231–232. 1923.

Acmispon maritimus var. ***brevivexillus*** (Ottley) Brouillet, comb. nov. BASIONYM: *Lotus salsuginosus* Greene var. *brevivexillus* Ottley, Univ. Calif. Publ. Bot. 10(3):217, t. 73. 1923. *Lotus maritimus* subsp. *brevivexillus* (Ottley) Munz, Fl. S. Calif. 449. 1974.

Lotus humilis Greene, Pittonia 2(9):140. 1890. *Hosackia humilis* (Greene) Abrams, Ill. Fl. Pacific States 2:545. 1944.

Acmispon mearnsii (Britt.) Brouillet, comb. nov. BASIONYM: *Hosackia mearnsii* Britton, Trans. New York Acad. Sci. 8(3–4):65. 1889. *Anisolotus mearnsii* (Britton) A. Heller, Muhlenbergia 8(5):60. 1912. *Lotus mearnsii* (Britton) Britton ex Greene, Pittonia 2(9):144. 1890. *Ottleya mearnsii* (Britton) D.D. Sokoloff, Feddes Repert. 110 (1–2):95. 1999.

Acmispon mearnsii (Britt.) Brouillet var. ***equisolensis*** (J.L. Anderson) Brouillet, comb. nov. BASIONYM: *Lotus mearnsii* (Britt.) Greene var. *equisolensis* J.L. Anderson, Madroño 43:261–262. 1996.

Acmispon micranthus (Nutt. ex Torr. & A. Gray) Brouillet, comb. nov. BASIONYM: *Hosackia micrantha* Nutt. ex Torr. & A. Gray, Fl. N. Amer. 1(2):324. 1838, non *Lotus micranthus* Benth. 1837. *Syrmatium micranthum* (Nutt.) Greene, Bull. Calif. Acad. Sci. 2(6B):147. 1886.

Lotus hamatus Greene, Pittonia 2(9):150. 1890. nom. nov., non *L. micranthus* Benth. 1836.

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